

# THINGET

## **MP760** series PLC+HMI

**Operation Manual**

**Xinje Electronic Co., Ltd**



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## 1. Brief Introduction of MP760

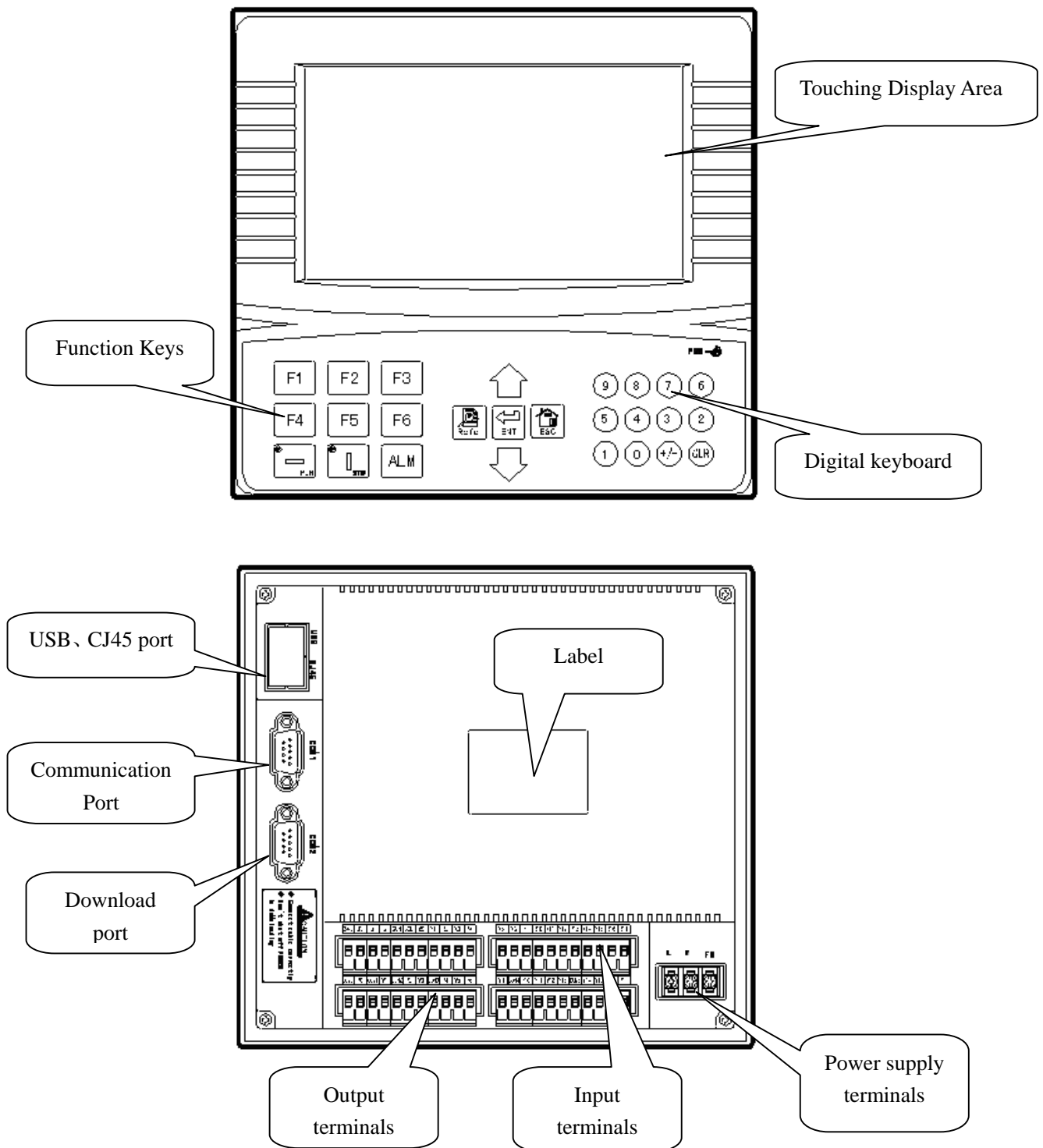
### 1. Functions and Specialties

- MP760 = TP760 + XC2-32
- Integrate logic control, analog input/output, HMI in one body
  - Digital Input: 16 points
  - Digital Output: 16 points
  - Analog Option: Choose any of XP3-2PT2AD-BD 、 XP3-2TC-P-BD 、 XP3-4AD-BD,etc. at your will
- Brief HMI edit interface with rich functions
- LCD Display: 480×234 pixels (7inch); LCD's using life can reach 50 million hours
- 26 function keys; set functions freely
- Key-press is sensitive but precise;
- The program port is designed to have multi-function: use one cable to program both HMI and PLC program;
- Water-proof level fits with IP65;
- Compact structure, save great space in the electrical control tank
- Simple but fashion appearance













### 2.General Specifications

Input Voltage	AC220V
Power Consumption	Lower than 10W (TYP2.0W)
Momentary Power Off Allowance	Less than 20ms
Voltage Endurance	AC1000V-10mA 1min. (between signal and ground)
Insulated resistor	DC500V--about10MΩ (between signal and ground)
Operating Temperature	0~50℃
Storage Temperature	-10~60℃
Ambient Temperature	20~85% (No Dew)
Vibration Endurance	10~25Hz (X, Y, Z each direction 30 min.2G)
Anti-interference	Voltage Noise: 1000Vp-p
Surrounding Atmosphere	No corrosive gasses
Protection Structure	Fit with IP65F

### 3. Each Part's Name



## 4. Basic Functions of the Keys

Key	Basic Functions
	Run the program, with LED indication lamp
	Stop running the program, with LED indication lamp
	No matter what state the panel stays, once press down this key, return to the system's start screen. The start screen is specified by the user when designing (the default screen is screen1). Normally set the system's start screen with the main menu screen or the screen which is used frequently.
	Turn to the previous screen
	Turn to the next screen
	Search, jump to the user specified screen
	Write the modified data into the register, then go on modifying the next register, after the last one been modified, exit the modifying state.
	Alarm list key, after setting the alarm list functions, press this key to enter alarm list screen quickly.
	When modifying the data of the register, clean the selected area.
	When modifying the data of the register, set the value to be negative or positive
	Number keys (0-9), in the state of setting data, the modifying bit turns to be the correspond key's value
	Function keys (F1-F6), common function keys

**Attention:** Besides the functions described in the above table, each key can also be defined to be “set ON”, “set OFF”, “Reverse”, or “Momentary ON” by the user.

## 5. LED Indicate Lamp

PWR: Power supply indication, normally on when power is on

RUN: Program to control it on

STOP: Program to control it on/off

## 6. Download/communication port

(1) Download Port: Both the HMI and XC2 use the same RS232 download port.

Pin2	RXD
Pin3	TXD
Pin4	RTS
Pin5	GND

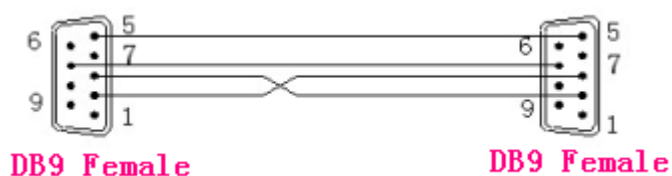
RS-485 Communication Port: be used to connect HMI with the slave equipments

Pin1	A
Pin9	B
Pin6	PRT (short connect pin5 and pin6 to enable print function)
Pin8	DOWNLOAD (short connect pin5 and pin8 to force downloading)

(2) Communication Port: The communication port for XC2 series PLC, RS-232 or RS-485

Pin2	RXD
Pin3	TXD
Pin5	GND

## 7. Connection Cable For Programing



## 2.Functions and Specifications

### 1. HMI Functions and Specifications

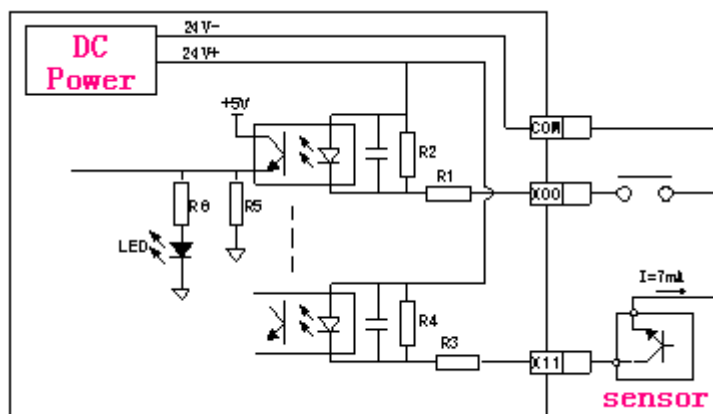
<b>Screen Property</b>	Item	TFT true color 256 color LCD
	Screen Size	7 inch
	Using Life	Up to 50000 hours, ambient temperature is 25 degrees, 24 hours running
	Display Area	480*234
	Contrast	Modifiable
	Words Setting	Any language you want
	External Dimension	Any font, any size
	Touch panel	Digital format touch
<b>Memory</b>	Screen	8MB
	Data	4KB
<b>Port</b>	Communication port	Support RS-232/RS-485
	Download port	RS-232

### 2. PLC Specifications

#### (1) Input specifications and wiring

Input Signal's Voltage	DC24V $\pm$ 10%
Input Signal's Current	7mA/DC24V
Input ON Current	Up to 4.5mA
Input OFF Current	Below 1.5mA
Input Response Time	About 10ms
Input Signal Form	Contact input or NPN normally ON transistor.
Circuit Insulation	Optical- coupling insulation
Input Action Display V	LED be on when input is on

#### (2) Input Wiring



### (3) Output Specifications and Wiring

#### ◆ Relay Output

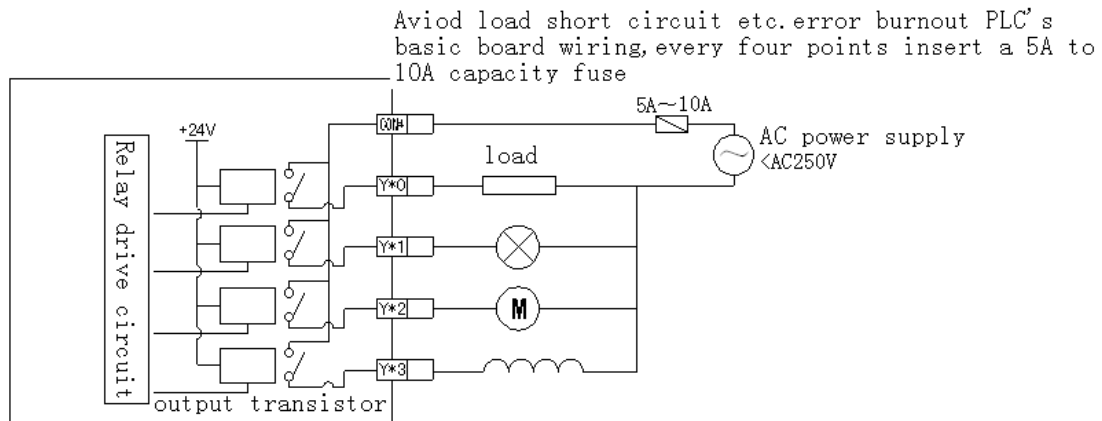
Internal Power Supply		Below AC250V、DC30V
Circuit Isolation		Mechanism isolation
Action Indication		LED indicator
Maximum Load	Resistor load	3A
	Induction load	80VA
	Lamp load	100W
Open Circuit Leakage Circuit		No
Minimum Load		DC5V 2mA
Response Time	OFF→ON	10ms
	ON→OFF	10ms

#### ◆ Transistor Output

Internal Power Supply		Below DC5~30V
Circuit Isolation		Optional-coupling insulation
Action Indication		LED indicator
Maximum Load	Resistor load	0.8A
	Induction load	12w/DC24V
	Lamp load	1.5W/DC24V
Open Circuit Leakage Circuit		< 0.1 mA
Minimum Load		DC5V 2mA
Response Time	OFF→ON	0.2ms
	ON→OFF	0.2ms

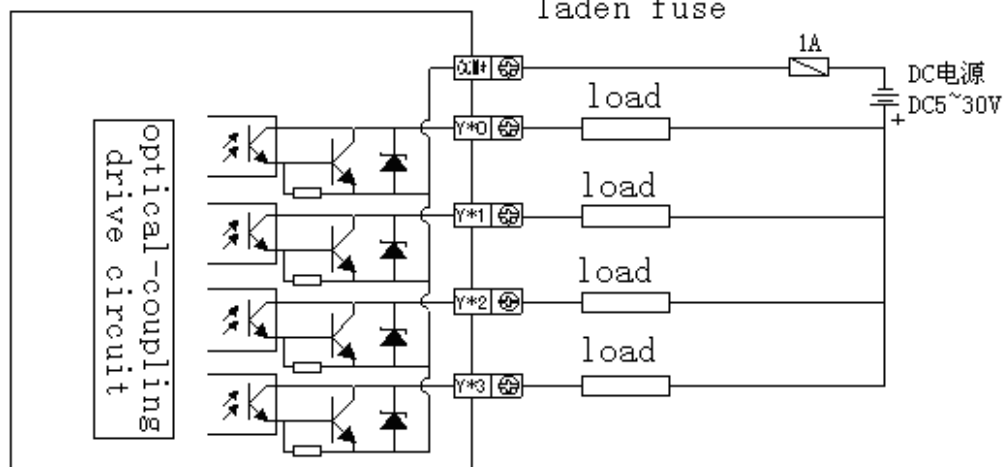
### (3) Output wiring

#### ◆ Relay output wiring



### ◆ Transistor output wiring

To avoid load short circuit and etc. error burn out the output unit, burnout program controller's basic wiring, please choose right laden fuse



## 3.Functions Configuration

### (1) Input/output format

- ◆ I/O: 16 inputs 16 outputs
- ◆ Input: optical-Coupling isolation
- ◆ Output: R type (relay output), T type (transistor output)

### (2) High-speed counter

- ◆ Single -phase high-speed counter: 5 channels

Channel	Input	Counter	Maximum frequency
CHL1	X0	C600	80KHZ
CHL2	X1	C602	80KHZ
CHL3	X3	C604	10KHZ
CHL4	X6	C606	10KHZ
CHL5	X7	C608	10KHZ

- ◆ AB phase high-speed counter: 2 channels

Channel	Input	Maximum frequency
CHL1	X0、X1	80KHZ
CHL2	X3、X4	5KHZ

### (3) High-speed pulse

- ◆ RT/T type: Y0、Y1, Maximum 200KHZ
- ◆ R type: Do not support

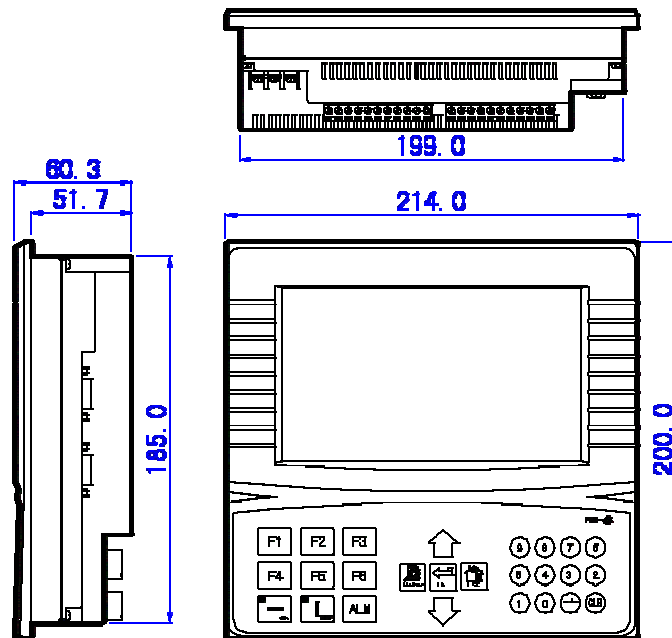
### (4) External interrupts

External interrupt: 2 channels

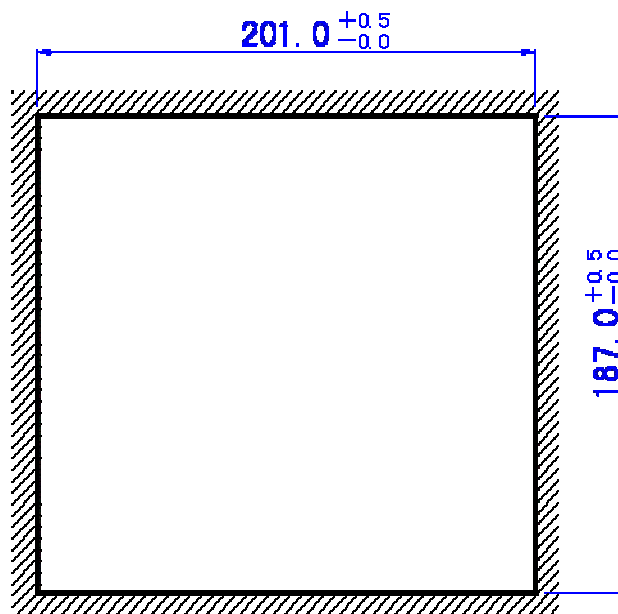
CHL1	X2	INT 0
CHL2	X5	INT 1

### 3. External Dimension and Installation

#### 1. External dimension



#### 2. Mounting dimension



## 4、 Program Software

### 1. Edit The Screen Project

The user can TouchWin edit tool to program MP760's HMI part. For the details, please refer to 《TP user manual》

### 2. Program the PLC Part

Use XCPPro to program MP760's PLC part. For the details, please refer to 《XC-PLC user manual》

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